IN THE CLAIMS:

1. A programmable driver/equalizer for overcoming InterSymbol Interference (ISI) and other transmission impairments in a variety of transmission media, comprising:

(a) a controllable driver set coupled to a transmission media;

(b) a transversal filter receiving a data input signal and coupled to the transmission media, the filter having programmable filter coefficients; and

(c) means for altering the frequency response of the controllable driver set to match the inverse of the frequency response of the transmission media.

2. The programmable driver/ equalizer of Claim 1 further comprising:

(d) means providing constant output peak amplitude on the transmission media independent of the programmable filter coefficients.

3. The programmable driver/equalizer of Claim 1 further comprising:

(e) logic means for switching the transversal filter and controllable drivers off high capacitance nodes when the programmable filter coefficients are inactive.

4. The programmable driver/equalizer of Claim 1 further comprising:

(f) means for reducing the (ISI) of the controllable driver set when the programmable filter coefficient are active.

5. The programmable driver/equalizer of Claim 1 further comprising:

(g) means responsive to the programmable filter coefficients providing control signals for matching the controllable driver set output to the inverse of the transmission media.

6. The programmable driver/equalizer of Claim 1 further comprising:

(h) means for storing a present data input signal bit and a history of at least two past data signal input bits in the transversal filter.

7. The programmable driver/equalizer of Claim 1 further comprising:

(i) shift register elements in the transversal filter providing time delays in processing the data input signal.

8. The programmable driver/equalizer of Claim 1 further comprising:

(j) buffer and latch means in the transversal filter for storing data input signals in time sequence.

9. The programmable driver/equalizer of Claim 1 wherein the transversal filter is described by $H(Z)=Ab_0 + Ab_1Z^{-1} + AB_2Z^{-2} + \ldots AB_nZ^{-n}$ where numerical value of the coefficients are set by register values in A and B coefficient setting circuits connected to the transmission line.

10. The programmable driver/equalizer of Claim 1 wherein the transversal filter is a finite infinite response (FIR) filter.

11. The programmable driver/equalizer of Claim 1 wherein the controllable driver set comprises weighted current drivers.

12. The programmable driver/equalizer of Claim 1 wherein the transversal filter controls the activation of the controllable driver set.

13. The programmable driver/equalizer of Claim 1 wherein the programmable filter coefficients are set based on the characteristics of the transmission media, speed of transmission, and characteristics of a receiving unit.

14. The programmable driver/equalizer of Claim 1 wherein the coefficients of the filter are altered in small increments and matched to each other.

15. The programmable driver/equalizer of Claim 1 wherein the driver out peak amplifier is constant, independent of programmable coefficient selection.

16. A method for overcoming InterSymbol Interference (ISI) and other various transmission impairments in a variety of transmission media, comprising the steps of:

(a) connecting the controllable driver set to an input node and to a transversal filter including programmable coefficients;

(b) biasing the controllable driver set for constant output peak amplitude, regardless of coefficient settings; and

(c) altering the coefficients of the transversal filter to vary the driver set output to provide a frequency response which is the inverse of the transmission medium.

17. The method of Claim 16 further comprising the steps of:

(d) storing digital input pulses in the transversal filter as time delay units.

18. The method of Claim 16 further comprising the steps of:

(e) enabling power settings of the controllable driver set to be used for all possible coefficient possibilities.

19. The method of Claim 16 further comprising the step of:

(f) reducing self-induced intersymbol interference from the drivers by the drive strength of the output stage.

20. The method of Claim 16 further comprising the steps of:

(g) switching off paths to high capacitance nodes in the driver circuit when the coefficients are inactive to minimize ISI.

21. The method of Claim 16 further comprising the steps of:

(h) selecting a combination of control bits for the coefficient setting means to select the appropriate frequency response for the driver according to the various transmission medium conditions.

22. The method of Claim 16 wherein the controllable driver set is plural current mode differential drive circuits.

23. A program medium, executable in a computer system, for overcoming InterSymbol Interference (ISI) and other transmission impairments in a variety of transmission media, the medium comprising:

(a) program instructions in the medium for connecting the controllable driver set to an input node and to a transversal filter including programmable coefficients;

(b) program instructions in the medium for biasing the controllable driver set for constant output peak amplitude, regardless of coefficient settings; and

(c) program instructions in the medium for altering the coefficients of the transversal filter to vary the driver set output to provide a frequency response which is the inverse of the transmission medium.

24. The program medium of Claim 23 further comprising:

(d) program instructions in the medium for storing digital input pulses in the transversal filter as time delay units.

25. The program medium of Claim 23 further comprising:

(e) program instructions in the medium for enabling power settings of the controllable driver set to be used for all possible coefficient possibilities.

26. The program medium of Claim 23 further comprising:

(f) program instructions in the medium for reducing self-induced intersymbol interference from the drivers by the drive strength of an output stage.

27. The program medium of Claim 23 further comprising:

(g) program instructions in the medium for switching off paths to high capacitance nodes in the driver circuit when the coefficients are inactive to minimize ISI.

28. The program medium Claim 23 further comprising:

(h) program instructions in the medium for selecting a combination of control bits for the coefficient setting means to select the appropriate frequency response for the driver according to the various transmission medium conditions.

29 The programming medium of Claim 23 further comprising:

(i) program instructions in the medium for biasing the controllable driver set for constant output peak amplitude, regardless of coefficient settings; and

(j) program instructions in the medium for altering the coefficients of the transversal filter to vary the driver set output to provide a frequency response which is the inverse of the transmission medium.

30. The programming medium of Claim 23 further comprising:

(k) program instructions in the medium for storing digital input pulses in the transversal filter as time delay units.

31. The programming medium of Claim 23 further comprising:

(l) program instructions in the medium for enabling power settings of the controllable driver set to be used for all possible coefficient possibilities.

32. The program medium of Claim 23 further comprising:

(m) program instructions in the medium for reducing self-induced intersymbol interference from the drivers by the drive strength of the output stage.